



## PATENT ABSTRACTS OF JAPAN

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B01D 63/02(21) Application number: 01098903  
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(72) Inventor: IDE KENICHIRO(54) BACKWASH DEVICE OF FILTER HAVING  
HOLLOW FIBER MEMBRANE

## (57) Abstract:

**PURPOSE:** To efficiently remove the impurities by providing an outlet nozzle of backwash water in the specified position so that the liquid level in a drum covering the outside of a protective pipe is not lowered to the level not higher than a definite one.

**CONSTITUTION:** A discharge port 10 of backwash water provided to the bottom part of a drum 6 is branched into both a backwash vent line 11 and a discharge line 12 of backwash water. The uppermost part of the tubular inner face of the backwash vent line 11 is positioned to the height  $h_2$  from a floor face. The relation of both this height  $h_2$  and the water level  $h_1$  of a filter at a time of bubbling is shown by  $h_1 = h_2$ . A backwash bent valve 16 and a discharge valve 17 of backwash water are provided respectively. Further a communication valve 15 is provided to a communication pipe 7 for connecting the upper part of the drum 6 to the backwash vent line 11. When the communication valve 15 and the backwash vent valve 16 are

simultaneously opened, siphon phenomena are prevented and the liquid level of the filter is stopped in a state wherein it has been accurately controlled to the necessary liquid level at the time of bubbling. Thereby the state of a pneumatic pump is always maintained and the whole backwash time is effectively utilized and therefore backwash efficiency is enhanced.

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